

REMARKS

Claims 1-23 are pending in the application. Claims 1, 2, 4 and 6-11 are rejected. Claims 3 and 5 are objected to. Claims 12-23 are withdrawn. Claim 3 is herein amended to include the limitations of base claims 1 and 2; claims 1 and 2 are subsequently canceled.

Response to Election Requirement

The Examiner notes that a provisional election was made without traverse to prosecute the invention of claims 1-11. Applicants confirm this election in replying to this Office action. Claims 12-23 are withdrawn from further consideration by the Examiner as being drawn to a non-elected invention.

Claim Rejections - 35 U.S.C. §102

Claims 1, 2, 4, 7, 10 and 11 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,358,665 B1 to Pawlowski et al. The Examiner cites U.S. Patent No. 4,220,342 to Shah and U.S. Patent No. 3,812,225 to Hosoda et al. to support the position that the t-butyl perbenzoate of Pawlowski et al. is known to decompose at about 300 °F (about 149 °C) and the dicumyl peroxide of Pawlowski et al. is known to decompose at about 150°C.

The Examiner indicates that claims 3 and 5 are merely objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants herein amend claim 3 by importing the limitations of base claims 1 and 2, and subsequently cancel claims 1, 2 and 4. Subsequently, Applicants submit that the claimed

invention, which as herein amended includes the limitations of allowable claim 3, should be allowable over the prior art.

Applicants note that the present invention resides in a resist material comprising a photo acid generator and an activator that is decomposed by heating at a temperature equal to or below the baking temperature of the resist material to thereby generate an acid or a radical. This feature of the resist material leads to an effect of the activator of neutralizing externally coming basic species prior to the exposure of the material for patterning, thereby preventing defects in the resultant resist film pattern, which can occur when such basic species are present at the time of the exposure. The invention also has an advantage that the activator need not be engaged in the reaction of the resist itself, because of the heating at a temperature equal to or below the baking temperature of the resist material.

Applicants note that Pawlowski et al. discloses a resist material comprising a photo acid generator and a thermal radical generator. However, Pawlowski et al. is silent with respect to the thermal radical generator “being decomposed by heating at a temperature equal to or below the baking temperature to generate a radical”. Because this limitation is not taught or suggested by the cited reference, Applicants request withdrawal of the rejection.

Claims 1, 2, 4, 6, 10 and 11 are rejected under 35 U.S.C. §102(b) as being anticipated by US 2002/0081504 A1 to Kong et al. Claims 1, 2, 4, 6, 10 and 11 are rejected under 35 U.S.C. §102(b) as being anticipated by US 2003/0022111 A1 to Falk et al.

Applicants herein amend claim 3 by importing the limitations of base claims 1 and 2, and subsequently cancel claims 1, 2 and 4. Applicants further correct the dependency of claim 5-10.

Subsequently, Applicants submit that the claimed invention, which as herein amended includes the limitations of allowable claim 3, should be allowable over the prior art.

Applicants note that the present invention is summarized above. Applicants further note that Kong et al. discloses a resist having a thermal acid generator added. However, Kong et al. is also silent with respect to the thermal acid generator “being decomposed by heating at a temperature equal to or below the baking temperature to generate an acid”.

Applicants further note that Falk et al. is silent with respect to the thermal acid generator “being decomposed by heating at a temperature equal to or below the baking temperature to generate an acid”.

Because this limitation is not taught or suggested by the cited reference, Applicants request withdrawal of the rejection.

Claims 1 and 8-11 are rejected under 35 U.S.C. §102(e) as being anticipated by US 2003/0098464 A1 to Kon et al.

The Examiner asserts that because Kon et al. teaches present invention of claim 1, the resist material described above of Kon would inherently be capable of being used for patterning a film or layer formed from a material containing basic species such as SiN, SiON, TiN, BPSG, BSG or PSG. Therefore, the Examiner concludes that Kon et al. also teaches present inventions of claims 10 and 11.

Applicants herein amend claim 3 by importing the limitations of base claims 1 and 2, and subsequently cancel claims 1, 2 and 4. Applicants further correct the dependency of claim 5-10. Subsequently, Applicants submit that the claimed invention, which as herein amended includes

the limitations of allowable claim 3, should be allowable over the prior art. Applicants request withdrawal of the rejection.

Claim Rejections for Obviousness-Type Double Patenting

Claims 1, 8, 10 and 11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 7 of copending Application No. 10/107,203. The Examiner asserts that the conflicting claims are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to add a resin of a polarity changeable type into the resist material of claim 1 of App. '203 with a reasonable expectation of obtaining a resist material.

The Examiner further asserts that combination of claims 1 and 7 of App. '203 would render obvious present inventions of claims 1 and 8, and asserts that since claims 1 and 7 of App. '203 teaches present invention of claim 1, it is the Examiner's position that the resist material taught by claims 1 and 7 of App. '203 would inherently be capable of being used for patterning a film or layer formed from the cited materials.

Claim 9 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7 and 2 of copending Application No. 10/107,203.

Applicants herein amend claim 3 by importing the limitations of base claims 1 and 2, and subsequently cancel claims 1, 2 and 4. Applicants further correct the dependency of claim 5-10. Subsequently, Applicants submit that the claimed invention, which as herein amended includes the limitations of allowable claim 3, should be allowable over the prior art. Applicants request withdrawal of the rejection.

Applicants note that the invention of copending application number 10/107,203 is a resist material comprising two photo acid generators having high reactivities for different exposure sources, respectively, and is not a resist material comprising an activator being decomposed by heating to generate an acid or a radical, as the invention of the application.

Because this limitation is not taught or suggested by the cited references, Applicants request withdrawal of the rejection.


In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for Examiner's allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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